UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/975,491 | 10/10/2001 | Pekka Ranta | 297-010564-US(PAR) | 9690 |

2512 7590 05/30/2006

PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06824

| EXAMINER | |
|---|---|
| CHO, HONG SOL | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2616 | |

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/975,491 | RANTA, PEKKA | |
| | Examiner | Art Unit | |
| | Hong Cho | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,13,16 and 19* is/are rejected.

7)☒ Claim(s) *10-12,14,15,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. In view of the appeal brief filed on 4/27/2006, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9, 13, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanc et al et al (U.S 6661777), hereinafter referred to as Blanc in view of Malkamaki et al, hereinafter referred to as Malkamaki (U.S 5577024).

Re claims 1, 16 and 19, Blanc discloses a fast signaling channel for broadcasting UTRAN (UMTS (Universal Mobile Telephone Service) Radio Access Network) information to packet users (*implementing fast signaling in a communication connection between a base station and a mobile station of a cellular radio network*, column 8, lines 48-51. Blanc discloses the frame timing in the network (*defining an arrangement of repeatedly occurring frames that consist of pieces of allocatable radio communication capacity between the base station and mobile stations communicating therewith*, column 7, lines 51-57) and broadcasting every frame with packet information on the Broadcast Channel (BCH), the Associated Control Channel (ACCH), the Forward Access Control Channel (FACH) or a fast signaling channel (*allocating pieces of radio communication capacity from the arrangement of repeatedly occurring frames to dedicated communication channel*, column 7, lines 54-65; column 8, lines 48-51). Blanc fails to disclose allocating a piece of radio communication capacity from the arrangement of repeatedly occurring frames to non-dedicated communication channel and utilizing said piece of radio communication capacity allocated to a non- dedicated fast signaling channel for conveying fast signaling messages between at least one mobile station and

the base station. Malkamaki discloses allocating every fifth slot of TDMA time slots (*allocating a piece of radio communication capacity from the arrangement of repeatedly occurring frames to non-dedicated communication channel from the arrangement of repeatedly occurring frames to non-dedicated communication channel*) for transmitting acknowledgement signal (*utilizing said piece of radio communication capacity allocated to a non- dedicated channel for conveying fast signaling messages between at least one mobile station and the base station*, column 4, lines 57-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of Malkamaki in allocating a certain slot of TDMA time slots for conveying fast signaling messages between at least one mobile station and the base station so that time-critical message such as handoff message would be transmitted without delay on a dedicated slot.

Re claim 2, Blanc discloses all of the limitations of the base claim, but fails to disclose allowing mobile stations communicating with a base station to use equally non-dedicated fast signaling channel. Malkamaki discloses simultaneous access of a plurality of mobile stations to the signaling channel (column 7, lines 28-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of multiple access of Malkamaki in accessing non-dedicated fast signaling channel to provide fair access to the channel when a given mobile station has data to transmit.

Re claims 3 and 4, Blanc discloses all of the limitations of the base claim, but fails to disclose allowing subgroup of all mobile stations communicating with a base station to

use equally non-dedicated fast signaling channel. Malkamaki discloses simultaneous access of a plurality of mobile stations to the signaling channel (column 7, lines 28-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of multiple access of Malkamaki in accessing non-dedicated fast signaling channel to provide fair access to the channel when a given mobile station has data to transmit.

Re claims 5-9, Blanc discloses all of the limitation of the base claim, but fails to disclose using multiple access schemes to separate fast signaling transmissions relating to several mobile stations from each other. Malkamaki discloses using frequency division multiple access (FDMA), time division multiple access (TDMA), and code division multiple access (CDMA) as well as a combination of these methods to distinguish between different signaling sources. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of different multiple access schemes of Malkamaki in accessing non-dedicated fast signaling channel based on these multiple access schemes so that a particular multiple access scheme or a combination of these multiple access schemes would be employed to meet a design choice. CDMA would allow numerous signals to occupy a single transmission for optimizing the use of available bandwidth. TDMA would increase the amount of data that can be carried by dividing each cellular channel into three time slots. FDMA would allow a single base station to serve many callers by dividing a radio frequency into several channels by splitting the frequency band into distinct segments, which are

assigned to various callers. FDMA is combined with TDMA for better use of narrow resources by allowing different users transmit using the same frequency at different time.

Re claim 13, Blanc discloses all of the limitations of the base claim, but fails to disclose allocating several differently located pieces of radio communication capacity from the arrangement of repeatedly occurring frames to non-dedicated communication channel in the communication direction from the mobile stations to the base station and allowing mobile stations to choose among said allocated pieces of radio communication capacity allocated to non-dedicated fast signaling channels in order to enable conveying fast signaling messages from the mobile stations to the base station in a way that is convenient to each mobile station. Malkamaki discloses allocating every fifth slot of TDMA time slots (*allocating several differently located pieces of radio communication capacity from the arrangement of repeatedly occurring frames to non-dedicated communication channel from the arrangement of repeatedly occurring frames to non-dedicated communication channel*) for each mobile station for transmitting acknowledgement signal (*allowing mobile stations to choose among said allocated pieces of radio communication capacity allocated to non-dedicated fast signaling channels in order to enable conveying fast signaling messages from the mobile stations to the base station*, column 4, lines 57-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Blanc to use the concept of Malkamaki in allocating a certain slot of TDMA time slots for conveying fast signaling messages between at least one mobile station and the base station so that time-critical

message such ad handoff message would be transmitted without delay on a dedicated slot.

### *Allowable Subject Matter*

4. Claims 10-12, 14, 15, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
5/26/2006

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600